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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,606	04/02/2001	Daniel M. Saban	03-SM-6723	3019

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EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,606

Applicant(s)

SABAN ET AL.

Examiner

Pedro J. Cuevas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.
2. Figure 15 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The disclosure is objected to because of the following informalities: on page 4, line 7; the description of Figure 4 makes a circular reference to the Figure 4.

Appropriate correction is required.

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Rotor Core Utilizing Laminations Having Slots With Dual Direction Skew Portions.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "substantially" in claim 8 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-4, 6, 8-12 and 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,182,483 to Hibino et al. in view of U.S. Patent No. 5,637,943 to Berger.

Hibino et al. disclose the construction of a rotor core (16) comprising a plurality of rotor laminations (17), each of said laminations having an outer periphery, a first set of rotor laminations (C_A) comprising a plurality of slots (2) having skew portions (2_b) extending in a first direction (Figure 3), a second set of said rotor laminations (C_B) comprising a plurality of slots (2) having skew portions (2_b) extending in a second direction (Figure 3).

However, it fails to disclose the construction of a rotor core having a plurality of notches having an open end at said outer periphery, having a substantially rectangular or irregular cross

sectional shape, extending axially with respect to a center axis of said rotor core and along an entire length of said core, and coextensive with a respective one of said slots.

Berger teach the construction of a rotor core having a plurality of notches (Figure 1) having an open end at said outer periphery, having a substantially rectangular or irregular cross sectional shape, extending axially with respect to a center axis of said rotor core and along an entire length of said core, and coextensive with a respective one of said slots for the purpose of producing of a groove shape for a squirrel-cage rotor which retains the conductor rod in a fixed position and thereby prohibits, with certainty, any imbalancing.

It would have been obvious to one skilled in the art at the time the invention was made to use the notched laminations disclosed by Berger on the rotor core disclosed by Hibino et al. for the purpose of producing of a groove shape for a squirrel-cage rotor which retains the conductor rod in a fixed position and thereby prohibits, with certainty, any imbalancing.

11. With regards to claims 6 and 18, Berger discloses a rotor core wherein a bridge of lamination material extends between a notch and a respective slot as shown in Figure 1.

12. With regards to claim 14-17 and 19-20, Hibino et al. in view of Berger disclose a rotor core having a central rotor shaft opening, a rotor shaft having an axis which is coaxial with a rotor core axis of rotation and extending through said central rotor shaft opening; a plurality of secondary conductors extending through said slots; and a plurality of permanent magnets located in said lamination notches.

13. With regards to claim 21-23, Hibino et al. disclose an electric motor having a stator comprising a stator core, first and second main windings, said first main winding configured to

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form a lower number of poles than said second main winding, said stator core forming a stator bore as shown in Figure 9, and a rotor as described above.

14. Claims 5 and 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,182,483 to Hibino et al. in view of U.S. Patent No. 5,637,943 to Berger as applied to claims 1-4, 6, 8-12 and 14-23 above, and further in view of U.S. Patent No. 6,369,686 to Pielok.

Hibino et al. in view of Berger disclose the construction of a rotor core as described above.

However, it fails to disclose a rotor core wherein the notches extend along a portion of the core, and no bridge of lamination material extends between at least one of said notches and a respective one of said slots.

Pielok teach a rotor core wherein the notches extend along a portion of the core, and no bridge of lamination material extends between at least one of said notches and a respective one of said slots for the purpose of providing laminations aligned in such a way that an automatic winding process can be performed through the respective winding openings as shown by Figures 1a and 1b.

It would have been obvious to one skilled in the art at the time the invention was made to use the lamination configuration disclosed by Pielok on the rotor core disclosed by Hibino et al. in view of Berger for the purpose of providing laminations aligned in such a way that an automatic winding process can be performed through the respective winding openings.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,182,483 to Hibino et al. in view of U.S. Patent No. 5,637,943 to Berger as applied to claims 1-4, 6, 8-12 and 14-23 above, and further in view of U.S. Patent No. 4,616,151 to Pryjmak.

Hibino et al. in view of Berger disclose the construction of a rotor core as described above.

However, it fails to disclose a rotor core further comprising a third set of rotor laminations.

Pryjmak teaches the construction of a rotor core comprising a third set of rotor laminations (Figures 1 and 2) for the purpose of providing a scattering of the magnetic forces across the field and case structure in such a way as to reduce excitation of the resonant modes of the case.

It would have been obvious to one skilled in the art at the time the invention was made to use the third set of rotor laminations disclosed by Pryjmak on the rotor core disclosed by Hibino et al. in view of Berger for the purpose of providing a scattering of the magnetic forces across the field and case structure in such a way as to reduce excitation of the resonant modes of the case.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas
June 3, 2002


NESTOR RAMIREZ
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